

GLASS SUBSTRATE FOR RECORDING MEDIUM AND RECORDING MEDIUM USING THIS SUBSTRATE

Publication number: JP10198942

Publication date: 1998-07-31

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Classification:

- international: C03C3/083; C03C21/00; G11B5/66; G11B5/84; G11B7/24; G11B11/10; G11B11/105; C03C3/076; C03C21/00; G11B5/66; G11B5/84; G11B7/24; G11B11/00; (IPC1-7): G11B5/66; C03C3/083; C03C21/00; G11B5/84; G11B7/24; G11B11/10

- european:

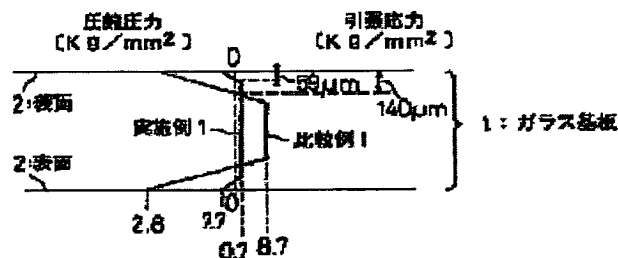
Application number: JP19960359286 19961229

Priority number(s): JP19960359286 19961229

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Abstract of JP10198942

PROBLEM TO BE SOLVED: To improve the strength and the durability to breakage with the lapse of time, etc., of a glass substrate by strictly controlling three of compressive stress, tensile stress and depth of the compressive stress layer generated when the glass substrate is chemically strengthening to an adequate range and polishing the end surface of the glass substrate, thereby removing the cracks, which are the causes for the breakage with the lapse of time. **SOLUTION:** The glass compsn. of the glass substrate 1 is formed by incorporating, by molar%, 57 to 74% SiO₂, 0 to 2.8% ZnO₂, 3 to 15% Al₂O₃, 7 to 16% LiO₂ and 4 to 14% Na₂O into the compsn. This sheet glass is cut out to a disk shape of a diameter of 96mm and is ground to 1.5mm thickness. The end faces are subjected to polishing then to washing and the substrate is immersed for 0.5 to 5 hours in a chemical strengthening treatment liquid kept at 200 to 500 deg.C. Consequently, the depth of the compressive stress generated in the glass substrate 1 attains 30 to 100μm, the value of the compressive stress <=2 to 15kg/mm<2> and the value of the internal tensile stress <=1.5kg/mm<2>. As a result, the factors that affect the strength of the glass substrate 1 are most adequately controlled and the strength and the durability to the breakage with the lapse of time are improved.



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